

**UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA**

SL MONTEVIDEO TECHNOLOGY, INC., a
Minnesota corporation,

Plaintiff,

Hon. Richard H. Kyle

-vs-

Case No: 03-3302-RHK/FLN

EATON AEROSPACE, LLC., a Delaware
limited liability company, and
ASTROMECC, INC., a Nevada corporation,

Defendants.

**MEMORANDUM IN SUPPORT OF
PLAINTIFF'S MOTION TO STRIKE
DEFENDANTS' LIABILITY EXPERT
WITNESS ANDREW NEUHALFEN, PHD.**

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I. INTRODUCTION

Plaintiff SL Montevideo Technology, Inc. ("SLMTI") sued Defendants Astromec, Inc. ("Astromec") and Eaton Aerospace, LLC ("Eaton") for violation of the Minnesota Uniform Trade Secrets Act, Minn. Stat., §§ 325C.01, et seq. ("MUTSA"), and Eaton for breach of express contract because Defendants misappropriated SLMTI's trade secrets in designing a high voltage brushless DC motor. The subject brushless DC motor was ultimately manufactured by Astromec and is being sold to Eaton for incorporation into a Stabilizer Trim Motor ("STM") designed, manufactured and sold by Eaton to Boeing for its use in the tail section of 737 model aircraft, a demanding aerospace environment.

Defendants have offered as their sole liability expert Andrew Neuhalphen, PhD., of Packer Engineering, Inc. ^A who was hired to “perform an analysis of a product development process ... of a brushless DC motor”, and to “... perform an analysis of product characteristics ... of a brushless DC motor”.^{1 B}

The Court should disqualify Dr. Neuhalphen from testifying at trial of this matter because:

- Dr. Neuhalphen lacks the requisite qualifications to offer expert testimony about the design, development process and characteristics of a brushless DC motor for any application, much less the high voltage, demanding aerospace environment involved in this case
- Dr. Neuhalphen’s opinions and conclusions fail to satisfy the evidentiary requirements for reliability and trustworthiness because his reasoning and methodology lack scientific validity.
- Dr. Neuhalphen’s opinions and conclusions fail to satisfy the evidentiary requirements for reliability and trustworthiness because they are not based on empirically-verifiable scientific knowledge.

II. GENERAL OVERVIEW OF LAW REGARDING ADMISSIBILITY OF EXPERT OPINION TESTIMONY

Fed.R.Evid. 702 governs admissibility of expert testimony and provides:

If a scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

^A Dr. Neuhalphen, Eaton and defense counsel are not strangers. Since 1999, Dr. Neuhalphen has been retained by or on behalf of Eaton on at least 9 other occasions. At least 3 of those cases involved defense counsel in this case, and at least 3 involved Eaton in-house counsel Kathy Wall, who is directing Eaton’s defense in this case. All but 1 of the 9 cases involved investigation of an alleged fault or failure of equipment manufactured by Eaton or a subsidiary resulting in personal injury or property damage. [Appendix 2]

^B All superscript numbers refer to endnote citations to Dr. Neuhalphen’s June 23, 2005 deposition.

That is, the proposed expert testimony must be relevant, the expert must be qualified, and the proposed testimony must be reliable and trustworthy. *Lauzon v. Senco Products, Inc.*, 270 F.3d 681 (8th Cir, 2001). To be relevant, the expert's proposed testimony must be useful to the fact finder in deciding the ultimate issue of fact. While it is permissible for properly qualified experts to address an ultimate issue of fact, (see Fed.R.Evid. 704(a), "... courts must guard against 'invading the province of the jury on a question which the jury was entirely capable of answering without the benefit of ... expert opinion. '" *Robertson v. Norton Company*, 148 F.3d 905 at 906 (8th Cir. 1998), citing *Walton v. Sherwin-Williams Co.*, 191 F.2d 277 (8th Cir. 1951) at 285. To be qualified, an expert must have "sufficient specialized knowledge to assist jurors in deciding the specific issues in the case." *Wheeling Pittsburgh Steel Corp. v. Beelman River Terminals, Inc.*, 254 F.3d 706, 715 (8th Cir. 2001) (*emphasis added*). Finally, the proposed testimony is reliable and trustworthy when, assuming the fact finder accepts the testimony as true, such testimony provides assistance to the fact finder in resolving the issues. See *Daubert v Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 at 591 (1993). "[I]n a case involving scientific evidence, *evidentiary reliability* will be based upon *scientific validity*. *Id.* at 591 n.9 (*italics in original*)

Although Rule 702 reflects an attempt to liberalize the rules governing the admission of expert testimony, *Weisgram v. Marley Co.*, 169 F.3d 514, 523 (8th Cir, 1999) *aff'd*, 528 U.S. 440 (2000), the rule does not permit complete and unfettered admissibility. Rather, the trial court is ordered to serve as the gatekeeper concerning the admissibility of expert testimony and in its gatekeeper function, it is charged with the responsibility of insuring the integrity of expert testimony. *Daubert*, 509 U.S. at 591, 593. Further, the proponent of the expert testimony bears the burden of proving its admissibility by a preponderance of the evidence. *Id.* at 592, n 10. See also *Lauzon, supra* at 686; *Carlson v. C.H. Robinson Worldwide, Inc.*, 2005 U.S. Dist. LEXIS 5674 (MN 2005).

III. DR. NEUHALFEN MAY NOT OFFER EXPERT OPINION TESTIMONY ABOUT THE DESIGN, DEVELOPMENT PROCESS OR CHARACTERISTICS OF THE BRUSHLESS DC MOTORS INVOLVED IN THIS CASE BECAUSE HE LACKS THE REQUISITE QUALIFICATIONS TO BE DEEMED AN EXPERT IN SUCH MOTORS

A. The Law

"It is the responsibility of the trial judge to determine whether a particular expert has sufficient specialized knowledge to assist jurors in deciding the specific issues in the case." *Wheeling Pittsburgh Steel Corp. v Beelman River Terminals, Inc.*, 254 F.3d 706, 715 (8th Cir. 2001) (citing *Kumho Tire Co., Ltd. V Carmichael*, 526 U.S. 137 (1999) (*emphasis added*)). In exercising its "gatekeeping" function, the Court generally analyzes the following categories to determine whether a proposed retained "expert" is qualified to offer the proposed testimony:

- (1) whether the expert has specialized, rather than merely generalized training and experience,
- (2) whether the expert has, at some previous point, provided consulting services to a manufacture or someone in the industry regarding the same issue;
- (3) whether the expert has been involved in offering similar expert opinions on similar issues;
- (4) whether the expert has engaged in independent research prior to the instant litigation, and
- (5) whether the expert has authored professional articles on the topics about which he will offer testimony.

See: Fed.R.Evid. 702, *supra.*, *Schaaf v Caterpillar, Inc.* 286 F.Supp.2d 1070, (N Dakota, 2003) (proffered expert lack of specialized training in, and failure to design, item fatal to testimony); *Lauzon*, *supra* at 692 (expert conducted research independent of litigation); *US v Robertson*, 387 F.3d 702 (2004) (expert qualified having testified over 50 times and had special training in the area of testimony); *US v Withorn*, 204 F.3d 790 (2000) (certified nurse-midwife expert qualified by special training and significant practice in her area of testimony); *Wheeling, supra*, (proffered expert not qualified because he had no formal education in area of warehousing practices, had never written about warehousing practices in any of his 60 published articles, and

had never been employed in the area of offered testimony); *American Family Insurance Group v JVC Americas Corp.*, 2001 US Dist LEXIS 8001 (2001) (proffered expert not qualified because not certified in area and had no formal training in area).

While an individual may be a highly-qualified expert in one area, that does not qualify him or her to offer testimony in another area in which he or she is not an expert.^c For example, in *Carlson, supra*, plaintiff in a sexual harassment suit tried to call Victoria Fuehrer as an expert witness regarding whether the defendant's human resource policies and procedures with respect to sexual harassment comported with accepted business practices. Ms. Fuehrer, who had been involved in the human resources field for almost 30 years, working in one corporate human resource department for 8 years, holding a vice-presidential position in human resources at for 1 year at another corporation, and operating for 16 years her own consulting firm that specialized in human resources and "organizational effectiveness." Ms. Fuehrer had two B.A. degrees, one in psychology and the other in sociology, and had authored approximately 14 published articles in the human resources field, but none dealing with the specific area of sexual harassment. Defendant's motion to strike Ms. Fuehrer's testimony because she lacked the appropriate experience to be considered an expert in the field of sexual harassment was granted, based on her lack of formal education or training with respect to sexual harassment,

^c See also *Walton v Sherwin-Williams Co.*, 191 F.2d 277, 285-286 (8th Cir. 1951) (plant pathologists and entomologists not qualified to speak regarding the adequacy of warning labels); *Robertson v Norton Company*, 148 F.3d 905 (8th Cir. 1998) (PhD qualified in related area not qualified to offer opinion on adequacy of warnings for a ceramic product because he had never designed a warning for a ceramic product and because his formal education and experience were limited); *Peitzmeier v. Hennessy Industries*, 97 F.3d 293 (8th Cir. 1996) (engineer's testimony properly excluded, despite claims that his opinions were founded on basic engineering principles, because engineer had neither designed nor tested the proposed safety device that allegedly should have been in place); *Pride v. The BIC Corp.*, 54 F.Supp. 2d 757 (Tenn. 1998) (engineers testimony properly excluded when area of expertise not particular to the science involved in the case); *Oddi v. Ford Motor Co.*, 234 F.3d 136 (3rd Cir. 2000) (engineer's expert opinion properly excluded for lack of discernible methodology because he performed no testing or analysis and his opinion was based on nothing more than his training and years of experience as an engineer).

her lack of any training or published articles on the topic of sexual harassment, and her limited practical experience with sexual harassment. In its ruling, the District Court relied on Ms. Fuehrer's deposition testimonial admissions. *Id.* at 14

B. The Facts

Dr. Neuhalfen agrees that the "product" at issue in the case is "a brushless DC motor for a high voltage application in a demanding aerospace environment." ² and that he was hired by Defendants' attorneys to "perform an analysis of a product development process" of the Astromec Motor and to "perform an analysis of [the] product characteristics" of the Astromec Motor and the Montevideo Motor, both of which are "products". ³ In summary, prior to being retained for this litigation, Dr. Neuhalfen had never seen, touched, operated, designed, developed, manufactured, assembled, disassembled, sold, tested, analyzed or researched a "product", nor had he ever studied, written, consulted, opined or testified about a "product". His prior experience with a brushless DC motor for any application was limited to operating laboratory optical test equipment powered by a brushless DC servo as doctoral student, and helping to design a solid state electronic controller device for a former employer's customer to use with the customer's brushless DC motor.

1. Dr. Neuhalfen Has No Specialized Education Or Training With Respect To A "Product" Or Brushless DC Motors For Any Application.

In 1983, Dr. Neuhalfen received a BS degree in electrical engineering from the University of Illinois at Champaign-Urbana.⁴ At the University of Illinois, Dr. Neuhalfen did not take any courses specifically directed toward the design, manufacture, assembly, testing, selling, utilizing or repairing of either a brushless DC motor for a high voltage application in a demanding aerospace environment or brushless DC motors in general. During his course work at the University of Illinois, Dr. Neuhalfen never personally designed, assembled, disassembled, tested, utilized or repaired either a brushless DC motor for a high voltage application in a demanding aerospace environment or brushless DC motors in general. ⁵

In 1992, Dr. Neuhalphen received a PhD degree in materials science and engineering from Northwestern University in Evanston, IL.⁶ While attending Northwestern, Dr. Neuhalphen did not take any courses specifically directed toward the design, manufacture, assembly, testing, selling, utilizing or repairing of either a brushless DC motor for a high voltage application in a demanding aerospace environment or brushless DC motors in general.⁷ During his course work at Northwestern, Dr. Neuhalphen never personally designed, assembled, disassembled, tested, or repaired either a brushless DC motor for a high voltage application in a demanding aerospace environment or brushless DC motors in general.⁸ Dr. Neuhalphen's dissertation involved researching the properties of various rare earths in semi-conductor devices known as diodes, which, are not used in the design or manufacture of either a brushless DC motor for a high voltage application in a demanding aerospace environment or a brushless DC motor for any other application.⁹ The closest Dr. Neuhalphen came to ever using a brushless DC motor was when he operated optics laboratory equipment powered by brushless DC servo motors while working on his dissertation. However, he does not know the name of the servos' manufacturer, and never had to disassemble, analyze or repair them.¹⁰ Dr. Neuhalphen has no formal education beyond his PhD¹¹, and has not had any special training with respect to the characteristics of a brushless DC motor for a high voltage application in a demanding aerospace environment.¹²

2. Dr. Neuhalphen Has No Employment Experience With Respect To A "Product" Or Brushless DC Motors For Any Application.

While studying for his undergraduate degree at the University of Illinois, Dr. Neuhalphen never worked for any company that designed, manufactured, assembled, tested, sold, used or repaired either a brushless DC motor for a high voltage application in a demanding aerospace environment or brushless DC motors in general.¹³ Further, while obtaining his PhD, Dr. Neuhalphen never worked for any company that designed, manufactured, assembled, tested, sold, utilized or repaired either brushless DC motors for a high voltage application in a demanding aerospace environment or brushless DC motors in general.¹⁴

From 1983-1988, the time during which Dr. Neuhalphen was employed by Motorola Corporation as a development engineer, Motorola did not commercially design, manufacture, assemble, sell, utilize or repair brushless DC motors for a high voltage application in a demanding aerospace environment or brushless DC motors for any application.¹⁵ Further, while employed by Motorola, Dr. Neuhalphen never designed, manufactured, assembled, sold, utilized or repaired brushless DC motors for a high voltage application in a demanding aerospace environment, or performed or supervised any activities involving brushless DC motors for a high voltage application in a demanding aerospace environment.¹⁶ ^D

From 1992 to 1998, Dr. Neuhalphen was employed by Littelfuse, Inc. as an engineering manager where he “led efforts to develop and implement electrical circuit protection devices”.¹⁷ During his employment, Littelfuse did not design, manufacture, assemble, sell, utilize or repair brushless DC motors for a high voltage application in a demanding aerospace environment, or brushless DC motors for any application.¹⁸ Dr. Neuhalphen never performed or supervised any activities on behalf of Littelfuse that involved brushless DC motors for a high voltage application in a demanding aerospace environment or brushless DC motors for any application.¹⁹ ^E

From 1998 to the present, Dr. Neuhalphen has been employed as a senior vice president and head of the electrical engineering department of Packer Engineering in Naperville, IL.²⁰ Packer is not now, and since 1998 has not been, engaged in the design, manufacture, assembly, sales, use or repair of brushless DC motors for a high voltage application in a demanding aerospace environment or brushless DC motors for any application.²¹

^D Dr. Neuhalphen’s contact brush with a BDCM while at Motorola was as part of a team that designed a solid state controller for customer to use with a BDCM that powered the fan of a heater and air conditioning unit in an automotive application. The Motorola controller, when completed, was simply shipped to Motorola’s customer for use. Dr. Neuhalphen concedes that this case does not involve any controller for a BDCM. [App 1:Neuhalphen 06-23-05 Dep, 150:10-151:14; 115:8-19]

^E In fact, Dr. Neuhalphen’s only experience with any aerospace product was at Littelfuse, which was asked by Boeing to develop a solid state circuit protection device for potential application in a space satellite. The device had no moving parts. He does not know if was ever actually put into production or used by Boeing, or anyone else. [App 1: Neuhalphen 06-23-05 Dep, 140:4-141:24]

In the entire course of his employment, Dr. Neuhalphen has never had to achieve a motor inertia performance specification for a brushless DC motor for a high voltage application in a demanding aerospace environment, and has no background, education, training or experience in achieving a motor inertia performance specification for a brushless DC motor for any application.²²

3. Dr. Neuhalphen Has Never Performed Consulting Services For Anyone Engaged In The Design, Development Or Characteristics Analysis Of A "Product" Or Brushless DC Motors For Any Application.

Dr. Neuhalphen's Packer Engineering resume says that he is responsible for performing and supervising electrical-related accident investigations, applied research, manufacturing process control and optimization, failure analysis of electrical and electronic systems, product development programs in the telecommunications, transportation and computer industries and intellectual property evaluations.²³

Prior to this case, Dr. Neuhalphen has never, on behalf of Packer Engineering, supervised or performed any investigation, applied research, manufacturing process control and optimization or development program, or intellectual property evaluation that involved a brushless DC motor for a high voltage application in a demanding aerospace environment, or a brushless DC motor for any application.²⁴ Furthermore, Dr. Neuhalphen has never supervised, or provided consulting services to, persons engaged in the development process for brushless DC motors for a high voltage application in a demanding aerospace environment or a brushless DC motor for any application.²⁵ Finally, prior to this case, Dr. Neuhalphen never supervised, or provided consulting services to, anyone engaged in analysis of the characteristics of a brushless DC motor for a high voltage application in a demanding aerospace environment and, except for his limited 1980's Motorola experience with respect to a motor controller, (an electronic device not involved in this case) has never supervised, or provided consulting services to, anyone engaged in analysis of the characteristics of a brushless DC motor for any application.²⁶

4. Dr. Neuhalfen Has Never Testified Or Been Qualified As An Expert With Respect To A “Product” Or A Brushless DC Motor For Any Application.

Dr. Neuhalfen has extensive experience offering expert testimony. Appendix 3 is a list of the 72 times Dr. Neuhalfen has testified at trial or by deposition in the 6 years from July 1999 to June 2005.²⁷ However, Dr. Neuhalfen has never testified in any case involving an airplane or airplane component parts, or in any case involving aeronautics in any fashion.²⁸

In the last six years, Dr. Neuhalfen has testified for and on behalf of Eaton or a subsidiary or related company at least 7 times.²⁹ In the 12 months from July 2004 to June 2005 (19 cases), virtually all of the testimony that Dr. Neuhalfen provided was related to electrical fault incidents as the result or cause of electrocutions or fires or electrical arc blasts (“the rapid release of electrical energy creating an arc or plasma of high energy, high temperature that creates extensive damage to people and materials”).³⁰ Of Dr. Neuhalfen’s 72 testimonial experiences from July 1999 to June 2004, 67 (93%) involved personal injury or property damage claims related to electrical faults or failures.³¹

Dr. Neuhalfen has never previously testified in court or by deposition with respect to (i) the design, (ii) the development process or (iii) an analysis of the characteristics of any brushless DC motors for a high voltage application in a demanding aerospace environment, or brushless DC motors in general.³² Dr. Neuhalfen has never previously sought to be qualified as an expert witness with respect to (i) the design, (ii) the development process or (iii) an analysis of the characteristics of any brushless DC motors for a high voltage application in a demanding aerospace environment or, or for brushless DC motors in general.³³ Dr. Neuhalfen has never previously testified in court or by deposition, or sought to be qualified as an expert, with respect to trade secrets of any brushless DC motors for a high voltage application in a demanding aerospace environment, or brushless DC motors in general.³⁴ ^F

^F Dr. Neuhalfen’s sole investigatory experience regarding brushless DC motors has been to conduct failure analyses on 2 occasion. However, he agrees that no failure analysis is involved here , because “there was no failure to analyze”. [App 1:Neuhalfen 06-23-05 Dep, 140:24-143:23]

5. Dr. Neuhalfen Has Never Engaged In Independent Research Regarding The Characteristics Of, Or Development Process For, A “Product” Or A Brushless DC Motor For Any Application.

Prior to this case, Dr. Neuhalfen has never conducted any independent research with regard to a brushless DC motor for a high voltage application in a demanding aerospace environment, or a brushless DC motor for any application,³⁵ has never conducted any independent research with regard to the characteristics of a brushless DC motor for a high voltage application in a demanding aerospace environment, or a brushless DC motor for any application,³⁶ and has never conducted any independent research with regard to the development process for a brushless DC motor for a high voltage application in a demanding aerospace environment, or a brushless DC motor for any application.³⁷ ^G

6. Dr. Neuhalfen’s Professional Activities Have Nothing To Do With “Products” Or Brushless DC Motors For Any Application.

Dr. Neuhalfen has never made any speeches or presentations at, or even attended, any professional seminars focused on the design, manufacture, assembly, testing, sale, utilization or repair of a brushless DC motor for a high voltage application in a demanding aerospace environment, or of brushless DC motors in general.³⁸ According to his resume, Dr. Neuhalfen has been published in numerous engineering-oriented publications. However, none of his personal publications concern design, manufacture, assembly, testing, sale, utilization or repair of a brushless DC motor for a high voltage application in a demanding aerospace environment, or brushless DC motors in general.³⁹

^G Dr. Neuhalfen did conduct some basic and fundamental “research” on brushless DC motors just for this case. His “Work Product” file contains two publications, neither authored by Dr. Neuhalfen, which he testified he “obtained specifically for purposes of this case” [App 1: Neuhalfen 06-23-05 Dep, 241:11-20]. Deposition Exhibit 315 [Appendix 4], is a 2003 article entitled: “Brushless DC (BLDC) Motor Fundamentals”. That article’s stated purpose is to discuss in detail the construction, working principles, characteristics and typical applications of brushless DC motors. Deposition Exhibit 316 [Appendix 5], is a chapter from a book entitled “Brushless Permanent Magnet Motor Design”. That chapter deals with the fundamentals of torque production in a brushless DC motor.

Dr. Neuhalfen is member of the Institute of Electrical and Electronic Engineers, the American, the Society of Materials, the International Microelectronics and Packaging Society and the National Fire Protection Association.⁴⁰ Dr. Neuhalfen does not know if any of the professional organizations of which he is a member have any committees or subcommittees focused on design, manufacture, assembly, testing, sale, utilization or repair of a brushless DC motor for a high voltage application in a demanding aerospace environment, or of brushless DC motors in general, but if they do, he is not a member of those committees or subcommittees.⁴¹

Dr. Neuhalfen does not know if any of the professional organizations of which he is a member promulgate rules or standards with respect to design, manufacture, assembly, testing, sale, utilization or repair of a brushless DC motor for a high voltage application in a demanding aerospace environment, or of brushless DC motors in general, but if they do, he has not read any such rules or standards and has had no role in writing or promulgating them.⁴²

According to his resume, Dr. Neuhalfen has several patents. However he does not have any patents for or even related to a brushless DC motor for a high voltage application in a demanding aerospace environment or brushless DC motors in general, or for their subassemblies or major components. Furthermore, he has not applied for but not received any such patents in the past, and has no such patent applications pending at the present time.⁴³

Dr. Neuhalfen has never personally participated in the development process, such as the process engaged in by SLMTI or Astromec, and has never analyzed trade secrets, for a brushless DC motor for a high voltage application in a demanding aerospace environment or a brushless DC motor for any application.⁴⁴

Prior to this case, Dr. Neuhalfen had never been asked to evaluate the capabilities of the designer or manufacturer of a brushless DC motor for a high voltage application in a demanding aerospace environment, had never visited the design or manufacturing facilities for a brushless DC motor for any application and, in short, had never done what "he was attempting to do with [his] assignment in this particular case."⁴⁵

C. Argument

Dr. Neuhalphen, with his degrees in electrical engineering, is apparently qualified by education, background, training and experience to serve as a testifying expert in at least one area, failure analysis in cases of personal injury and property damage allegedly resulting from defects in design, manufacture and/or installation of electrical devices. Presumably that is why Eaton has hired Dr. Neuhalphen at least 8 times in the last 6 years specifically for that area of expertise, and why he testified on those subjects on 18 of 19 occasions just in the last year.

As demonstrated above, however, from Dr. Neuhalphen's own testimony, he is unquestionably unqualified to testify on the issues he agrees are involved in this case. He has no specialized knowledge with respect to brushless DC motors generally, much less with respect to the high voltage motors used in this case in a demanding aerospace environment. He has no educational, professional or employment experience with such motors. He has never consulted, testified or been qualified as an expert with respect to such motors. As he candidly admitted, he has never done what "he was attempting to do with [his] assignment in this particular case.

Dr. Neuhalphen has made the first step of this Court's "gatekeeper" function relatively easy. He simply doesn't have the qualification ticket to get in.

IV. THE CONCLUSIONS REACHED BY DR. NEUHALFEN FAIL TO SATISFY EVIDENTIARY REQUIREMENTS FOR RELIABILITY AND TRUSTWORTHINESS BECAUSE HIS REASONING AND METHODOLOGY LACK SCIENTIFIC VALIDITY

A. The Law

In Daubert, supra, the Supreme Court recognized that Rule 702 "clearly contemplates some degree of regulation of the subjects about which an expert may testify." *Id.* at 589. Specifically, the trial judge must determine

... whether the expert is proposing to testify to (1) *scientific knowledge* that (2) will assist the trier of fact to understand or determine a fact in issue. This entails a preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue. *Id.* at 592-593 (*emphasis added*).

The first test imposed by Rule 702 is that the expert must be testifying to scientific knowledge. As demonstrated in Section III above, Dr. Neuhalphen by his own admission lacks scientific knowledge regarding brushless DC motors of any type.

Assuming *arguendo*, however, that Dr. Neuhalphen has the requisite qualifications to offer expert testimony in the matter, the Court needs to continue its analysis under Rule 702 to determine whether the reasoning or methodology underlying the testimony is scientifically valid and whether that reasoning or methodology properly can be applied to the facts in issue. There are any number of nonexclusive factors courts can apply in determining whether the reasoning or methodology is trustworthy and reliable:

- (1) whether the theory or technique can be (and has been) tested;
- (2) whether the theory or technique has been subjected to peer review and publication;
- (3) whether, in respect to a particular technique, there is a high known or potential rate of error;
- (4) whether there are standards controlling the technique's operation; and,
- (5) whether the theory or technique enjoys general acceptance within a relevant scientific community.

See *Peitzmeier v Hennessy Indus., Inc.*, 97 F.3d 293, 297 (8th Cir. 1996).

Daubert's progeny^H provide additional factors a courts can properly consider such as:

- (6) whether the expertise was developed for litigation or naturally flowed from the expert's research;
- (7) whether the proposed expert ruled out other alternative explanations;
- (8) whether the proposed expert sufficiently connected the proposed testimony with the facts of the case; and,

^H See: *Lauzon v. Senco Products, Inc.*, 270 F.3d 681 (8th Cir. 2001); *Bogosian v. Mercedes-Benz of N. Am., Inc.*, 104 F.3d 472, 479 (1st Cir. 1997) (finding testimony of the expert and the plaintiff must be sufficiently related); *Daubert v. Merrell Dow Pharm., Inc.*, 43 F.3d 1311, 1317 (9th Cir. 1995) (addressing whether opinion was developed naturally out of research or solely for litigation); *Claar v. Burlington N.R. Co.*, 29 F.3d 499 (9th Cir. 1994) (discussing whether the expert accounted for obvious alternative explanations); *Blue Dane Simmental Corporation v. American Simmental Association*, 178 F.3d 1035 (1999) (8th Cir.) (trial court did not abuse its discretion when it excluded otherwise qualified expert economist's testimony because his conclusion failed to take into account all independent variables that could affect the conclusion.)

- (9) whether the expert considered all independent variables that could affect the conclusion.

The trial court is not limited to any particular list of factors in assessing relevance and reliability, but is to be flexible in adapting its analysis of the proposed experts methodology or reasoning to fit the facts of each case. *Daubert, supra* at 593, 594. "The polestar, however, must always be "scientific validity--and thus the evidentiary relevance and reliability--of the principles that underlie a proposed submission." *Id.* at 594-595 (*emphasis added*).

In *Kuhmo Tire supra*, the Supreme Court found that the exclusion of an otherwise qualified tire expert's use of visual and tactile examination of automobile tires was within the trial courts discretion, despite the fact that this methodology was generally accepted within the relevant field. In so holding, the Court found that it was not the general acceptance of the methodology that was relevant, but focused on "the reasonableness of using such an approach, along with [the expert's] particular method of analyzing the data thereby obtained, to draw a conclusion regarding the particular matter to which the expert testimony was directly relevant." *Id.* at 154 (*emphasis added*). Because the Court found that the research method did not satisfy *Daubert*, and was not a reliable indicator of the results to which the expert would testify, exclusion of the testimony was proper. See *Kumho* at 155-156.

B. The Facts

Plaintiff's complaint alleges, in general, the Eaton wrongfully transmitted Astromec confidential and proprietary design and manufacturing details of the Montevideo Motor and its key subassemblies and components, and that Astromec used that information to design and manufacture the Astromec Motor. Dr. Neuhalphen testified that his assigned task was to perform an analysis of Astromec's product development process, and the characteristics of the Astromec Motor and the Montevideo Motor, comparing the two motors to identify differences and/or similarities between them.⁴⁶ Based upon his investigation, more fully described below, Dr. Neuhalphen concluded and would opine that Eaton did not misappropriate any SLMTI trade secrets and that Astromec designed and developed the Astromec Motor independently.

Dr. Neuhalfen and 5 other Packer employees conducted an “investigation” by reviewing thousands of pages of Astromec, Eaton and SLMTI documents and information.⁴⁷ Dr. Neuhalfen reviewed and relied upon summaries of depositions prepared by Packer employees David Atkins and Dan Malek.⁴⁸ Dr. Neuhalfen also reviewed and relied upon a comparison of the components and subassemblies of the Montevideo Motor and the Astromec Motor prepared by Packer employee Paul Fenoglio.⁴⁹

On March 15, 2005, Dr. Neuhalfen made a special trip to the Astromec facility in Carson City, Nevada with Eaton attorneys Michael King (“Mr. King”), Elizabeth Bradshaw (“Ms. Bradshaw”) and Kathy Wall (“Ms. Wall”), where they met and talked with Astromec engineer Walter Fanelli (“Mr. Fanelli”) for several (4-5) hours. The primary purpose of the meeting was to provide Dr. Neuhalfen an opportunity to sit face-to-face with Mr. Fanelli and talk with him about the Astromec Motor and its development process. Prior to the meeting, Dr. Neuhalfen had read Mr. Fanelli’s July 1 and 2, 2004 deposition. The only record of the discussion is a 3-page handwritten set of Dr. Neuhalfen’s notes. Mr. Fanelli responded to questions from Dr. Neuhalfen, Mr. King and Ms. Bradshaw. In formulating his opinions, Dr. Neuhalfen relied heavily on information obtained during the March 15, 2005 meeting with Mr. Fanelli, because Dr. Neuhalfen determined that Mr. Fanelli was “very truthful and credible”.⁵⁰

On March 15, 2005, after his discussion with Mr. Fanelli, Dr. Neuhalfen accompanied by Mr. Fanelli, Mr. King, Ms. Bradshaw, and Ms. Wall, toured the Astromec facility and evaluated the design and test capabilities of that facility; however, Dr. Neuhalfen has no records or photographs of this activity. Dr. Neuhalfen talked with or observed several assemblers of the Astromec Motor, but obtained no information about how long they had worked there or their background, training, education or experience with assembly of brushless DC motors. Dr. Neuhalfen observed equipment in the test area, but no one was actively engaged in any testing process. Dr. Neuhalfen also observed several persons in the stock room area who were not working with Astromec Motors. The total number of persons Dr. Neuhalfen saw was 7-10.⁵¹

Subsequent to his meeting with Mr. Fanelli and his walk through the Astromec facility, Dr. Neuhalphen concluded that (i) Astromec had the capability to design, test and manufacture the Astromec Motor, (ii) Mr. Fanelli had the necessary background, training, education, experience, knowledge and skill set to independently design the Astromec Motor, (iii) Astromec and had independently designed and developed the Astromec Motor, and (iv) there are more differences between the Astromec Motor and the Montevideo Motor than there are similarities, and there are only 9 general similarities, none of which are proprietary trade secrets.^I

In reaching all of his conclusions ⁵², Dr. Neuhalphen testified he did not rely on any “scientific principles” *per se*, but rather employed only the “scientific method”^J, which he described as:

- 1) Define the problem;
- 2) Collect the data associated with the incident
- 3) Analyze the data;
- 4) Develop a hypothesis;
- 5) Test the hypothesis with fact associated with the case through “an analytical thought process”;
- 6) If the hypothesis stands up to the facts, then you have developed the opinion.

Dr. Neuhalphen uses the “scientific method” (as he describes it) “as a general technique to resolve problems”, and does not know the known or knowable rate of error of this technique.⁵³

Dr. Neuhalphen tests the hypotheses he develops by using an “analytical thought process” based on his own background, training, education and experience.⁵⁴

^I Dr. Neuhalphen initially testified that there are 5 general similarities between the Astromec Motor and the Montevideo Motor, in that they both contain (a) a housing, (b) rotors with permanent magnets, (c) stators, (d) Hall effect positioning devices, and (e) leads that feed into the motor. Upon further questioning, Neuhalphen stated that both motors have (f) bearings at the front and rear of the unit, (g) laminations in the stator that consist of copper windings, (h) teeth on the end of the rotor shaft for incorporation into the end device, and (i) [Confidential] slot stators. [App 1: Neuhalphen Dep, 192:3-195:7] These vague “similarities”, of course, are found in every motor.

^J Dr. Neuhalphen taught this “scientific method” in a chemistry class at McHenry County, IL Community College in the 1990’s. [App 1: Neuhalphen 06-23-05 Dep, 103:7-104:24]

Using his “scientific method”, Dr. Neuhaufen concluded that Astromec had the capability to design the Astromec motor, based upon his March 15, 2005 discussion with Mr. Fanelli, his determination that Mr. Fanelli was “very truthful and credible”, and his walk through of the Astromec facility.⁵⁵ The criteria Dr. Neuhaufen used to formulate that opinion were what Astromec and Mr. Fanelli actually did during the design process.⁵⁶

To test his hypothesis that Astromec had the capability to test brushless DC motors, Dr. Neuhaufen’s criteria merely included the physical presence in the Astromec facility of test equipment and test stations, documentation of test results, and Mr. Fanelli’s “credible” self-described ability to perform and analyze test results.⁵⁷ To test his hypothesis that Astromec had the capability to assemble brushless DC motors, Dr. Neuhaufen’s criteria included the physical presence in the Astromec facility of assembly stations, documentation of assembly procedures, and observation of a completed Astromec Motor.⁵⁸

Using his “scientific method”, Dr. Neuhaufen came to the conclusion that Mr. Fanelli had the necessary education, background, training and experience, and exhibited the knowledge and skill set, to independently design and develop the Astromec Motor, based upon his March 15, 2005 discussion with Mr. Fanelli in Carson City, NV and his determination that Mr. Fanelli was “very truthful and credible”.⁵⁹

With respect to his opinion that the Astromec Motor development process was independent of any influence by Eaton, Dr. Neuhaufen does not know if his “scientific method” has ever been applied by anyone else to analysis of the development process of a brushless DC motor for a high voltage application in a demanding aerospace environment or whether it has been subjected to peer review in that context. Dr. Neuhaufen is not aware of any literature publications with respect to application of his “scientific method” to analysis of such a development process. In fact, even he has applied his “scientific method” only to the Astromec Motor development process, and has never previously applied it to or tested it on any similar process.⁶⁰

C. Argument

Dr. Neuhalfen's analysis and evaluation fail to meet "the polestar" test for scientific validity because Dr. Neuhalfen does not intend to testify to "scientific knowledge" that will "assist the trier of fact" on the issue before this Court. Rather, in reaching every one of his conclusions, he applied his interpretation of the scientific method, but failed to identify any scientific theory, methodology or principles which he utilized in reaching his conclusions.

Further, Dr. Neuhalfen's description of his "scientific method" is suspect. Most elementary and middle school science students learn that "reproducibility" is a standard requirement for a scientific method or technique. An experimental result produced by a particular researcher or group of researchers is generally evaluated by other independent researchers who attempt to reproduce it; that is, they repeat the same experiment themselves and see if it gives the same results as reported by the original researcher. Dr. Neuhalfen's testimony with regard to the reproducibility of his conclusions is at best inconsistent. He first said that reproducibility is part of the scientific method.⁶¹ Then he said it isn't.⁶² Then he said the "reproducibility of the testing of the hypothesis is part of my analysis within the evaluation of this matter."⁶³ Then he intimated reproducibility was of no consequence, because he couldn't see how anyone else with his background, training, education and experience could come up with any different conclusions.⁶⁴ K

Dr. Neuhalfen's opinion is not supported by the kind of scientific theory or empirical research and testing that permit him to conclude that the Astromec Brushless DC Motor was designed and developed independently by Astromec, especially in light of the fact of his demonstrated complete lack of knowledge and experience about brushless DC motors for a high voltage application in a demanding aerospace environment, a brushless DC motor for any application, and the process used to design brushless DC motors.

^K With regard to Dr. Neuhalfen's lack of background, training, education and experience with respect to the design and development process for high voltage brushless DC motors for use in a demanding aeronautical environment, see pages 6-12, *infra*.

V. THE CONCLUSIONS REACHED BY DR. NEUHALFEN FAIL TO SATISFY EVIDENTIARY REQUIREMENTS FOR RELIABILITY AND TRUSTWORTHINESS BECAUSE THEY ARE NOT BASED ON EMPIRICALLY-VERIFIABLE SCIENTIFIC KNOWLEDGE

A. The Law

In its function as “gatekeeper” under *Daubert*, the Court’s inquiry involves not only whether the theory, methodology or principles that the expert used are generally accepted within the relevant scientific or professional community, but also whether it was reasonable for the expert to use that methodology to “draw a conclusion regarding the particular matter to which the expert testimony is directly relevant.” *Kumho Tire Co*, 526 US at 154. As the Fourth Circuit explained in *Oglesby v General Motors Corp.*, 190 F.3d 244, 250 (4th Cir. 1999), “[a] reliable expert opinion must be based on scientific, technical or other specialized knowledge and not on belief or speculation....” (*emphasis added*) Courts look to expert witnesses to provide scientific explanations to assist the trier of fact. “The statements constituting a scientific explanation must be capable of empirical test.” *Daubert, supra*, at 593 (*citations omitted*) That is, “In all cases, the district court must ensure that it is dealing with an expert, not just a hired gun.” *Tyus v Urban Search Mgmt.*, 102 F3d 256, 263 (7th Cir, 1996) *cert denied*, 520 US 1251 (1997)

Several circuits have addressed the issue of admissibility of expert opinion testimony based on credibility in general. In *United States v Barnard*, 490 F2d 907, 912 (9th Cir. 1973), *cert denied*, 416 U.S. 959 (1974), defendants offered expert psychiatric testimony that a government witness was a sociopath who would lie in testifying. In upholding the trial court’s rejection of this testimony, the Court stated:

Competency is for the judge, not the jury. Credibility, however, is for the jury -- the jury is the lie detector in the courtroom . . . It is now suggested that psychiatrists and psychologists have more [expertise in weighing the veracity of a witness] than either judges or juries, and that their opinions can be of value to both judges and juries in determining [credibility]. Perhaps. The effect of receiving such testimony, however, may be two-fold: first, it may cause juries to surrender their own common sense in weighing testimony; second, it may produce a trial within a trial on what is a collateral but still an important matter.

Further, in *United States v Azure*, 801 F.2d 336, 340-341 (8th Cir. 1986), the Court, citing *Barnard, supra*, held that not only was the testifying expert properly precluded from "... putting his stamp of approval" on the victims story, but that "(n)o reliable test for truthfulness exists and [the expert] was not qualified to judge the truthfulness" of what the victim had told him. The court concluded that the jury may well have relied on the expert's opinion and "surrender[ed] their own common sense in weighing testimony...." *Id.*

Nothing in either *Daubert* or the Federal Rules of Evidence requires a court to admit opinion evidence which is connected to existing data only by the *ipse dixit* of the expert. A court may conclude that there is simply too great an analytical gap between the data and the opinion proffered. See *Turpin v. Merrell Dow Pharmaceuticals, Inc.*, 959 F.2d 1349, 1360 (6th Cir. 1992), *cert. denied*, 506 U.S. 826 (1992).

B. The Facts

Plaintiff incorporates by reference section III.B, pages 15-18, above.

Out of a myriad of possible numbers of slots and slot configurations, the Montevideo Motor and the Astromec Motor have the same number of slots ⁶⁵ and a virtually identical configuration. Dr. Neuhalphen concludes that this occurred as the result of an Astromec development process completely free of input and influence by Eaton, based on his review of documentation, including transmissions between Astromec engineers and Eaton engineers regarding design details.⁶⁶ Dr. Neuhalphen concedes that there were multiple meetings between Astromec engineers and Eaton engineers in Carson City, NV and Grand Rapids, MI between 1999 and 2004 regarding design details of the Astromec Motor, but that he was not present and therefore has no personal knowledge of what was discussed and "would have to rely on testimony from others as to what was said."⁶⁷ Dr. Neuhalphen further concedes that there were hundreds of telephone conferences between Astromec engineers and Eaton engineers between 1999 and 2004 regarding design details of the Astromec Motor, but that he was not present and therefore has no personal knowledge of what was discussed and "would have to rely on testimony from others as to what was said."⁶⁸

In addition to relying on Mr. Fanelli's statements to him to support his opinion that Astromec independently developed the stator architecture of the Astromec Motor, Dr. Neuhalphen stresses Mr. Fanelli's "heavy reliance", and hence his own, on an in-house Astromec software program. However, Dr. Neuhalphen has no personal knowledge of the program's development, operation or reliability. Dr. Neuhalphen has never used the program, and it was not demonstrated for him during his March 15, 2005 visit to the Astromec Facility in Carson City, NV. Dr. Neuhalphen knew nothing about this program prior to being retained in this litigation, and does not know who (if anyone) in the motor design industry uses the program.⁶⁹

C. Argument

In support of his conclusions, Dr. Neuhalphen offers no scientific knowledge that is capable of "empirical testing" to explain his conclusions. Rather, he relies almost exclusively upon his evaluation of what Defendants' employees said in their depositions or personal interview, and his evaluation of their credibility. Even though Dr. Neuhalphen lacks any prior experience with brushless DC motors and has never designed or developed one, he nevertheless opines that the Astromec Brushless DC Motor was designed and developed independently by Astromec because he believes Mr. Fanelli exhibits the knowledge and skill set to independently design and develop the Astromec Motor. He does so in large part because he has determined that Mr. Fanelli is "very truthful and credible".⁷⁰ However, such reliance and belief does not constitute scientific knowledge subject to empirical testing, but is purely an invasion of the province of the trier of fact.

V. SUMMARY AND CONCLUSION

As this Court noted with respect to its "gate-keeping" responsibility in *Maras v Avis Rent-A-Car*, 2005 U.S. Dist. LEXIS 535 [*9] (January 14, 2005):

The objective is "to make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field." *Kumho Tire*, 526 U.S. at 152.

Dr. Neuhalphen is not, and never has been, “an expert in the relevant field” of design and development of brushless DC motors. His testimony is based neither on professional studies (he did none) nor on personal experience (he has none). In *Maras* [*21], this Court further quoted from *Daubert*, 509 U.S. 597: “In practice, a gatekeeping role for the judge, no matter how flexible, inevitably on occasion will prevent the jury from learning authentic insights and innovations.” There is certainly no such danger here.

Furthermore, Dr. Neuhalphen’s “scientific method” meets none of the requisite criteria for relevance and reliability.

- Dr. Neuhalphen’s “scientific method”, by his own admission, has not previously been applied by anyone, including himself, to the assemblies, processes, procedures and tasks involved in design of any brushless DC motor, much less one for the high voltage, demanding aeronautical environment involved in this case.
- Dr. Neuhalphen’s “scientific method” is not an engineering principle regarding brushless DC motors that can be and has been tested.
- Dr. Neuhalphen’s “scientific method” is not an engineering principle regarding brushless DC motors that can be and has been subject to peer review and publication.
- Dr. Neuhalphen admits that he can’t quantify the known or potential rate of error when his “scientific method” is applied to the issues in this case, and in fact expressed puzzlement over the entire concept.
- There are no standards controlling the operation and application of Dr. Neuhalphen’s “scientific method” to analyzing and forming opinions regarding the design, development process and characteristics of brushless DC motors.
- Dr. Neuhalphen failed to identify any scientific principles enjoying general acceptance within the relevant scientific that he relied upon in reaching his conclusions.^L

^L Appropriately stated, the true scientific method enjoys general acceptance not only in the “relevant scientific community”, but in fact the *entire* scientific community. However, therein lies

- Dr. Neuhalphen admits that he has no prior education, background, training or experience with respect to design and development of the type of brushless DC motors involved in this case, and that hence whatever expertise he has must of necessity have been developed solely for this case.
- Dr. Neuhalphen did not, and could not, rule other alternative explanations for the incredible similarities between the Montevideo Motor and the Astromec Motor, if for not other reason because he admits he does not know who said what to whom during countless meetings and telephone exchanges between Astromec and Eaton engineers.
- Dr. Neuhalphen failed to connect the proposed testimony with the facts of the case because he failed to acknowledge, much less consider, pertinent, undisputed physical evidence of extensive similarities between the Montevideo Motor and the Astromec Motor in reaching his conclusions

Under the “scientific” paradigm offered by Dr. Neuhalphen, he would always be qualified as expert to testify to just about anything. All he needs do is define the problem (as suggested by his client), collect the data associated with the incident (as filtered through what his clients tell him they did), analyze the data (despite having no particular knowledge or experience in the area); develop a hypothesis (usually his client’s version of the problem); test the hypothesis (through his own “an analytical thought process”), and if the hypothesis stands up to the facts, “then you have developed the opinion”.⁷¹ Plaintiff does not believe that is what the Supreme Court had in mind in *Daubert* and *Kumho*.

Finally, Dr. Neuhalphen is essentially attempting to take over the jury’s determination of credibility. The jury members can assess Mr. Fanelli’s background, training, education and experience, evaluate the credibility of the Astromec and Eaton employees, and determine what

the fallacy of applying it, rather than particular, testable, accepted scientific principles, because *anyone*, scientist or non-scientist, expert or non-expert can use exactly the same analysis technique and come up with any number of different results.

they did and when and how he did, all without the necessity for Dr. Neuhalphen to tell them what to think. "Expert testimony" based on hearsay interviews and self-serving declarations is not expert testimony at all, but simply impermissible endorsement of the credibility of other witnesses.

For the reasons stated here, and in Plaintiff's June 28, 2005 Objection and Motion to Reverse, In Part, Magistrate Judge Noel's June 20, 2005 Ruling on Defendants' May 25, 2005 Motion For Protective Order, the Court is respectfully requested to enter its order:

1. Barring Defendants' retained expert liability witness, Andrew Neuhalphen, PhD, from offering any lay or expert opinion testimony at trial.
2. Barring Defendants from referencing or offering into evidence the Fed.R.Civ.P. 26(a)(2)(B) report submitted by or on behalf of Andrew Neuhalphen, PhD.

Dated: June 29, 2005

PLUNKETT & COONEY, PC


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- ¹ App 1:Neuhalfen 06-23-05 Dep, 55:24-56:5
- ² App 1:Neuhalfen 06-23-05 Dep, 57:6-59:5
- ³ App 1: Neuhalfen 6-23-2005 Dep, 55:24-56:13, 59:6-18
- ⁴ App 1: Neuhalfen 06-23-05 Dep, 111:9-13
- ⁵ App 1: Neuhalfen 06-23-05 Dep, 116:9-117:12
- ⁶ App 1: Neuhalfen 06-23-05 Dep, 112:9-18
- ⁷ App 1:Neuhalfen 06-23-05 Dep, 118:21-119:19
- ⁸ App 1:Neuhalfen 06-23-05 Dep, 119:20-120:21
- ⁹ App 1:Neuhalfen 06-23-05 Dep, 121:9-125:13
- ¹⁰ App 1:Neuhalfen 06-23-05 Dep, 121:9-125:13
- ¹¹ App 1:Neuhalfen 06-23-05 Dep, 125:14-16
- ¹² App 1:Neuhalfen 06-23-05 Dep, 170:23-171:3
- ¹³ App 1:Neuhalfen 06-23-05 Dep, 117:13-24; 57:15-58:7 .
- ¹⁴ App 1:Neuhalfen 06-23-05 Dep, 120:22-121:8
- ¹⁵ App 1:Neuhalfen 06-23-05 Dep, 148:10-151:20
- ¹⁶ App 1:Neuhalfen 06-23-05 Dep, 148:10-151:20
- ¹⁷ App 1:Neuhalfen 06-23-05 Dep, 146:16-21
- ¹⁸ App 1:Neuhalfen 06-23-05 Dep, 146:21-147:6
- ¹⁹ App 1:Neuhalfen 06-23-05 Dep, 147:24-148:9
- ²⁰ App 1:Neuhalfen 06-23-05 Dep, 140:24-141:9
- ²¹ App 1:Neuhalfen 06-23-05 Dep, 141:4-143:21
- ²² App 1: Neuhalfen 06-23-05 Dep, 222:12-223:4
- ²³ App 1: Neuhalfen 06-23-05 Dep, 142:1-13
- ²⁴ App 1: Neuhalfen 06-23-05 Dep, 142:14-146:15
- ²⁵ App 1: Neuhalfen 06-23-05 Dep, 162:7-164:22
- ²⁶ App 1: Neuhalfen 06-23-05 Dep, 172-173:11-5, 175:4-23
- ²⁷ App 1: Neuhalfen 06-23-05 Dep, 228-238:23-3; App 2

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- ²⁸ App 1: Neuhalfen 06-23-05 Dep, 238:4-20; App 3
- ²⁹ App 1: Neuhalfen 06-23-05 Dep, 239:7-241:10; App 3
- ³⁰ App 1: Neuhalfen 06-23-05 Dep, 228:23-234:16; App 3
- ³¹ App 1: Neuhalfen 06-23-05 Dep, 234:17-238:3; App 3
- ³² App 1: Neuhalfen 06-23-05 Dep, 154:13-20; 169:15-19; 169:20-24
- ³³ App 1: Neuhalfen 06-23-05 Dep, 154:17-20; 170:1-10; 176:1-177:13
- ³⁴ App 1: Neuhalfen 06-23-05 Dep, 211:16-212:4; 212:11-15
- ³⁵ App 1: Neuhalfen 06-23-05 Dep, 154:21-157:10
- ³⁶ App 1: Neuhalfen 06-23-05 Dep, 177:23-178:6
- ³⁷ App 1: Neuhalfen 06-23-05 Dep, 170:17-22
- ³⁸ App 1: Neuhalfen 06-23-05 Dep, 125:14-127:15
- ³⁹ App 1: Neuhalfen 06-23-05 Dep, 137:19-138:7
- ⁴⁰ App 1: Neuhalfen 06-23-05 Dep, 135:4-5
- ⁴¹ App 1: Neuhalfen 06-23-05 Dep, 135:17-136:9
- ⁴² App 1: Neuhalfen 06-23-05 Dep, 136:10-137:18
- ⁴³ App 1: Neuhalfen 06-23-05 Dep, 138:16-140:18
- ⁴⁴ App 1: Neuhalfen 06-23-05 Dep, 162:24-163:24; 211:3-22
- ⁴⁵ App 1: Neuhalfen 06-23-05 Dep, 110:11-112:4
- ⁴⁶ App 1: Neuhalfen 06-23-05 Dep, 55-56, 62
- ⁴⁷ App 1: Neuhalfen 06-23-05 Dep, 59:19-60:1; 61:2-62:16; 195:21-196:17
- ⁴⁸ App 1: Neuhalfen 06-23-05 Dep, 35:5-36:8
- ⁴⁹ App 1: Neuhalfen 06-23-05 Dep, 26:1-11
- ⁵⁰ App 1: Neuhalfen 06-23-05 Dep, 78:8-95:21
- ⁵¹ App 1: Neuhalfen 06-23-05 Dep, 95:22-101:9
- ⁵² App 1: Neuhalfen 06-23-05 Dep, 102:14-103:6; 108:1-3; 178:16-23, 180:6-183:13
- ⁵³ App 1: Neuhalfen 06-23-05 Dep, 190:20-21.
- ⁵⁴ App 1: Neuhalfen 06-23-05 Dep, 104:3-8
- ⁵⁵ App 1: Neuhalfen 06-23-05 Dep, 95:10-12; 101:10-103:3

⁵⁶ App 1: Neuhalfen 06-23-05 Dep, 106:4-107:8

⁵⁷ App 1: Neuhalfen 06-23-05 Dep, 108:10-13.

⁵⁸ App 1: Neuhalfen 06-23-05 Dep, 108:10-109:5

⁵⁹ App 1: Neuhalfen 06-23-05 Dep, 95:10-12; 223:13-225:16

⁶⁰ App 1: Neuhalfen 06-23-05 Dep, 178:16-23; 184:12-17; 185:6-8; 186:23-187:8, 189:8-190:3

⁶¹ App 1: Neuhalfen 06-23-05 Dep, 105:1-8

⁶² App 1: Neuhalfen 06-23-05 Dep, 105:9-21

⁶³ App 1: Neuhalfen 06-23-05 Dep, 105:22-106:3

⁶⁴ App 1: Neuhalfen 06-23-05 Dep, 106:5-11

⁶⁵ App 1: Neuhalfen 06-23-05 Dep, 218:21 - 219:24; 220:1-222-11

⁶⁶ App 1: Neuhalfen 06-23-05 Dep, 196:1-24

⁶⁷ App 1: Neuhalfen 06-23-05 Dep, 196:24-200:11

⁶⁸ App 1: Neuhalfen 06-23-05 Dep, 200:12-201:18

⁶⁹ App 1: Neuhalfen 06-23-05 Dep, 215:7-218:21

⁷⁰ App 1: Neuhalfen 06-23-05 Dep, 95:10-12; 101:10-103:3

⁷¹ App 1: Neuhalfen 06-23-05 Dep 103:8-18